Appendix D
Sample Contract Clauses for CADD Deliverables in MicroStation Format

NOTE: The following clauses are included to provide guidance in specifying only the CADD-related requirements. Edit as necessary for the specific type(s) of work to be performed. The information provided in bold italics type is to be used in filling in the blanks and should be deleted from the final contract clauses.

A. GENERAL.

All _____ *(insert a general description of work to be accomplished using CADD software, e.g., design work, surveying work, drawings, maps, details)* to be provided under this contract shall be accomplished and developed using computer-aided design and drafting (CADD) software and procedures conforming to the following criteria.

B. GRAPHIC FORMAT.

All CADD data shall be supplied in Bentley Corporation, three-dimensional, MicroStation _____ *(insert 95, 5.0, SE, etc.)*, native electronic digital format (i.e., .dgn, .cel, .i), with a _____, version _____ *(insert UNIX, MS-DOS, MS-DOS/Windows, or Windows NT, and version currently used)*, operating system. The target platform is a _____ *(insert name and model of computer hardware)* _____ *(insert either workstation or personal computer)*, with a _____ *(insert UNIX, MS-DOS, MS-DOS/Windows, or Windows NT)*, version _____ *(insert version currently used)*, operating system. The contractor shall ensure that all digital files and data (e.g., base files, reference files, cell libraries) are compatible with the Government's target CADD system (i.e., basic and advanced CADD software, platform, database software), and adhere to the standards and requirements specified herein. The term "compatible" means that data can be accessed directly by the target CADD system without translation, preprocessing, or postprocessing of the electronic digital data files. It is the responsibility of the contractor to ensure this level of compatibility.

(OPTION 1 - Add when requesting work be accomplished and CADD deliverables be provided to the Government in a specific advanced application software format. Project Architect and INROADS are included as examples. Delete and add different software packages as they apply).

The contractor shall also produce drawings and models which are compatible with Intergraph Corpora-

tion's Project Architect, version _____ *(insert version used)*, and INROADS, version ___ *(insert version used)*, software. This includes full functionality of Project Architect's associated database.

(OPTION 2 - Add when requesting scanning work).

The supplied scanned electronic digital files shall be delivered in the native Intergraph digital format which is fully compatible with Intergraph Corporation's I/RAS _____ *(insert either B, PC, 32, C, or Engineer, as appropriate)*, version _____ *(insert version used)*, software.

(OPTION 3 - Add when a nongraphical database software is to be used).

The nongraphical database delivered with prepared drawings shall be in _____, version _____ or higher, format *(insert name and version of database software used, e.g., Oracle, Informix)*. All linkages of nongraphical data with graphic elements, relationships between database tables, and report formats shall be maintained. All database tables shall conform to the structure and field-naming guidance provided by the Government.

C. CADD STANDARDS.

CADD drawings shall be prepared in accordance with the applicable provisions of the "Tri-Service Architectural/Engineering/Construction (A/E/C) Computer-Aided Design and Drafting (CADD) Standards." Standard drawing size shall be _____ *(insert size used by target installation)*. _____ *(insert either English or SI)* working units and the Government's standard file-naming convention shall be used.

(OPTION - The contracting officer may choose to include a summary of the major target installation or job-specific CADD standards to be used as a supplement with the Government-furnished materials, if available). Sample terminology for incorporating this summary into the technical specifications is as follows:

CADD drawings, details, and data shall be prepared in accordance with the specific target installation and job-specific CADD standards included in _____ *(insert document title)*, the electronic seed/prototype files, the electronic detail library, the electronic symbol library, the electronic text and font library, and the electronic line style/type library provided by the Government. The Contractor shall submit a written request for approval of any deviations from the Government's established CADD standards. No deviations from the Government's established CADD standards will be permitted unless prior written approval of such deviation has been received from the Government.

D. DELIVERY MEDIA AND FORMAT.

A copy of all CADD data and files developed under this contract shall be delivered to the Government on electronic digital media at _____ *(insert the appropriate submittal times, e.g., project completion, with each submittal as required in the Schedule of Work, etc.)*. For projects with electronic digital files or sets of files less than or equal to four (4) diskettes, the electronic digital data and files may be provided on 3-1/2-inch high-density floppy disks. For projects with electronic digital files or sets of files larger than four (4) diskettes, the electronic digital data and files shall be provided on _____ *(insert one or more of the following: (1) 8-mm tape cartridge, (2) 4-mm tape cartridge, (3) R/W optical disk, (4) compact disc, read-only memory (CD-*

ROM)). The electronic digital media shall be in the format which can be read and processed by the Government's target CADD system.

The external label for each electronic digital media shall contain, as a minimum, the following information:

(1) The Contract Number (and Delivery Order Number if applicable) and date.

(2) The format and version of operating system software.

(3) The name and version of utility software used for preparation (e.g., compression/decompression) and copying files to the media.

(4) The sequence number of the digital media.

(5) A list of the filenames.

Before a CADD file is placed on the delivery electronic digital media, the following procedures shall be performed:

(1) Remove all extraneous graphics outside the border area and set the active parameters to a standard setting or those in the Government-furnished seed file.

(2) Make sure all reference files are attached without device or directory specifications.

(3) Compress and reduce all design files using _____ ***(insert name and version of file compression/decompression software used by Government)***, or other compatible file compression/decompression software approved by the Contracting Officer. If the file compression/decompression software is different from that specified above, then an electronic digital media copy of the file compression/decompression software shall be purchased for the Government and provided to the Government with the delivery media.

(4) Include all files, both graphic and nongraphic, required for the project (i.e., color tables, pen tables, font libraries, cell libraries, user command files, plot files, etc.). All cells/blocks not provided as Government-furnished materials must be provided to the Government as a part of the electronic digital deliverables.

(5) Make sure that all support files such as those listed above are in the same directory and that references to those files do not include device or directory specifications.

(6) Include any standard sheets (i.e., abbreviation sheets, standard symbol sheets, etc.) necessary for a complete project.

(7) Document any fonts, tables, etc., developed by the A-E or not provided among the Government-furnished materials. The contractor shall obtain Government approval before using anything other than the Government's standard fonts, linetypes, tables, cells/blocks.

(8) Each finished drawing (sheet) shall have its own separate plot file. The plot file for each finished drawing shall be provided to the Government in a _____ ***(insert name, model, and other specifications for the specific plotter configuration used by the Government target installation)***

plotter configuration.

The CADD files shall be copied to the delivery media using _____ *(insert name and version of appropriate media, e.g., Intergraph Corp. CLIX Version 7.0, operating system "SCPIO" command (for UNIX), or DOS PKZIP command (for MS-DOS)).*

E. DRAWING DEVELOPMENT DOCUMENTATION.

Complete documentation concerning the development of each finished drawing shall be included in the first eight levels/layers as described in the "Tri-Service A/E/C CADD Standards." The following additional information for each finished drawing shall also be included in the nonplot level/layer, X-****-NPLT:

(1) How the data were input (e.g., keyed in, downloaded from a survey total station instrument (include name and model), etc.).

(2) Brief drawing development history (e.g., date started, modification date(s) with brief description of item(s) modified, author's name, etc.).

(3) The names of the reference, cells/blocks, symbols, details, tables, and schedule files required for the finished drawing.

(4) Level/layer assignments and lock settings.

(5) Text fonts, line styles/types used, and pen settings.

F. HARD COPY TRANSMITTALS.

A transmittal letter containing, as a minimum, the following information shall accompany each electronic digital media submittal to the Government. The transmittal letter shall be dated and signed by the appropriate Contractor's representative. The transmittal letter shall be provided to the Government on 8-1/2-inch by 11-inch paper. An electronic copy of the transmittal letter in a _____ *(insert type of format required, e.g., DOS ASCII Text)* format shall also be provided on the electronic digital media submitted to the Government.

(1) The information included on the external label of each media unit (e.g., disk, tape), along with the total number being delivered, and a list of the names and descriptions of the files on each one.

(2) Brief instructions for transferring the files from the media.

(3) Certification that all delivery media are free of known computer viruses. A statement including the name(s) and release date(s) of the virus-scanning software used to analyze the delivery media, the date the virus scan was performed, and the operator's name shall also be included with the certification. The release or version date of the virus-scanning software shall be the current version which has detected the latest known viruses at the time of delivery of the digital media.

(4) A statement indicating that the A-E will retain a copy of all delivered electronic digital media (with all files included) for at least one year and, during this period of time, will provide up to _____

(insert number of copies which may be needed, e.g., two) additional copies of each to the Government, if requested, at no additional cost.

In addition, the Contractor shall provide the following "Plot File Development and Project Documentation Information" as an enclosure or attachment to the transmittal letter provided with each electronic digital media submittal. The "Plot file Development and Project Documentation Information" shall be provided to the Government on 8-1/2-inch by 11-inch paper. An electronic copy of this information in a _____ *(insert type of format required, e.g., DOS ASCII Text)* format shall also be provided on the electronic digital media submitted to the Government.

(1) Documentation of the plot file for each drawing which will be needed to be able to duplicate the creation of the plot file by the Government at a later date. This documentation shall include the plotter configuration (e.g., name and model of plotter), pen settings, drawing orientation, drawing size, and any other special instructions.

(2) Instructions concerning how to generate plotted, or hard copy, drawings from the provided plot files.

(3) List of any deviations from the Government's standard layer/level scheme and file-naming conventions.

(4) List of all new symbol cells/blocks created for the project, which were not provided to the Contractor with the Government-furnished materials.

(5) List of any non-IGES crosshatch/patterns used.

(6) List of all new figures, symbols, tables, schedules, details, and other cells/blocks created for the project, which were not provided to the Contractor with the Government-furnished materials, and any associated properties.

(7) List of all database files associated with each drawing, as well as a description and documentation of the database format and schema design.

(8) Recommended modifications which will be necessary to make the data available for GIS use.

The Contractor shall also provide _____ *(insert number of copies)* _____ *(insert either full-size or half-size)* _____ *(insert either mylar, paper, or vellum)* hard copy*(ies)* of each finished drawing with each electronic digital media submittal to the Government.

G. OWNERSHIP.

The Government, for itself and such others as it deems appropriate, will have unlimited rights under this contract to all information and materials developed under this contract and furnished to the Government and documentation thereof, reports, and listings, and all other items pertaining to the work and services pursuant to this agreement including any copyright. Unlimited rights under this contract are rights to use, duplicate, or disclose text, data, drawings, and information, in whole or in part in any manner and for any purpose whatsoever without compensation to or approval from the Contractor. The Government will at all reasonable times have the right to inspect the work and will have access to and the right to make copies of the above-mentioned items. All text, electronic digital files, data, and other

products generated under this contract shall become the property of the Government. By reference, the following DFAR clauses are included in this contract as a part of the requirements herein:

a. DFAR 252.227-7013, "Rights in Technical Data and Computer Software."

b. DFAR 252.227-7018, "Restrictive Markings on Technical Data."

c. DFAR 252.227-7019, "Identification of Restricted Rights Computer Software."

d. DFAR 252.227-7028, "Requirement for Technical Data Representation."

e. DFAR 252.227-7037, "Validation of Restrictive Markings on Technical Data."

H. GOVERNMENT-FURNISHED MATERIALS.

(1) One hard copy of "Tri-Service A/E/C CADD Standards."

(2) Electronic seed/prototype files containing the Government's preset standard settings, or workspaces (e.g., working units, color table library, line style/type library, level/layer structures, text font library, symbol cells/blocks), for use by the Contractor. The seed/prototype files will be provided on _____ (insert type of digital media, e.g., 3-1/2-inch high-density floppy diskettes, 4-mm tape cartridge).

(3) Electronic reference files containing the Government's standard border sheets. Reference files will be provided on _____ (insert type of digital media).

(4) Guidance for development of database files.

(5) Electronic cell/block or reference files containing the Government's standard project details on _____ (insert type of digital media).

(6) One hard copy of "_____" (insert the name of the target installation's and job-specific CADD standards).